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The following communications were made in connection with the proceedings of the Biological and Microscopical Section :

Activity in Donax.—Dr. BENJAMIN SHARP described an interesting case of activity in a bivalve studied by him on the beach of the island of Nevis, B. W. I. Noticing some active little animals in the swash of the breakers, he took them at first sight to be a form of crustacea. He had some difficulty in catching them and to his surprise found them to be a species of *Donax*. When they wished to flee from a real or supposed cause of danger, they protruded more than half their length from the sand, as the breakers receded. Those that were not carried into the deeper water on becoming exposed to the air by the retreating waves, buried themselves with astonishing rapidity in the sand and waited for the swash to again flow over them, not protruding themselves until the current returned. The method of getting up the beach was just the reverse of the former action ; that is, they protruded after the receding water had left them dry, so that the “up-shoot” carried them up the slope. As soon as the water began to recede they anchored themselves and disappeared into the sand rapidly, waiting thus until the approaching wave came to help them again, and so on. The power of appreciating the shock caused by the breaker on the sand, and also the approach of footsteps, the power of recognizing quickly the direction of the current and how to utilize it in avoiding danger, and the ability to place themselves in a more congenial position on the beach, were indicated by these actions. Did they depend on the sense of hearing ? These bivalves exist in enormous numbers on the beach, which actually bristled with them when they protruded. They were of all sizes, from exceedingly minute specimens to those a half an inch or more in length.

Change of habit causing change of structure.—Dr. BENJAMIN SHARP also made some remarks on the Flicker or Ground Woodpecker, *Colaptes auratus*, his attention having been called to the subject by an amateur ornithologist, Mr. Long, now of Nantucket.

It is well-known to ornithologists that the flicker has departed from the typical habits of the woodpecker in a number of ways. It feeds on insects, especially ants, taken from the ground in preference to the laborious method of excavating them from under the bark of trees or from decaying wood, and in making its nest it selects a hollow tree, rather than make the effort of boring out a new cavity in the solid wood. The popular name, “Ground Woodpecker,” indicates, to a certain extent, the divergence from the woodpecker’s habits.

When the bird is examined it will be found that the bill is weaker than is usual in this group of birds, and that it is curved more or less in different specimens, showing a considerable amount of variation. If this curve increases it will soon become impossible for the bird to use it as a drill except in soft substances. The feet in this

species are weak when compared with those of the typical woodpecker.

Dr. Sharp held that this deviation from the woodpecker type in the structure of the bird was due to the change of habit; the change of function preceding and causing the change in structure, and not, as was suggested, that the curve in the bill leads to the change in the habit.

This change in the species could hardly be looked upon as being caused by anything but the direct will or desire of the individual itself, as the surrounding conditions, climate, general character of food, enemies, etc., remained the same, as far as is known. He concluded by saying that the changes were as yet so slight that the species could hardly be looked upon as degenerate, but was probably tending to become so.

NOVEMBER 26.

Mr. CHARLES MORRIS, in the chair.

Twenty-two persons present.

A paper entitled "Catalogue of the Owls, Strigae, in the collection of the Academy of Natural Sciences of Philadelphia" by Witmer Stone, was presented for publication.

The following were elected members:—

James F. Sullivan, Thomas M. Lightfoot, C. D. Lippincott, Minford Levis, M. D., Samuel Stryker Kneass, M. D., and Mrs. Elizabeth S. Bladen.

N. M. Romanoff (Grand Duke Nicholas of Russia), was elected a correspondent.

The following was ordered to be printed:—